Period 1 Daniel Yang, Mark Choi Kimchi Coders

Dig to Korea

General Description

Our project is a clone of the flash game Dig To China. The player controls a miner with a limited amount of time each round. The miner digs down and collects resources that can be used to buy upgrades once the time for the round runs out. While digging, the miner can also collect time powerups to give you more time. The farther down the player digs the harder it gets to mine through the ground. The aforementioned upgrades will allow the player to mine faster or start with more time to get to lower depths. The goal of the game is to get to the bottom of the map (Korea) as fast as possible. At the moment we do not believe any external libraries are needed.

Functionalities

- Movement influenced by gravity
- Collisions detection with blocks as well as powerups
- Mining in multiple directions, including directions influenced by multiple arrow keys
- Programming randomized terrain with a static list
 - Multiple layers with different resources and densities
- A game and round timer
- An "inventory" to keep track of resources
- A shop to spend resources and upgrade mining speed
- Possible animation of the drill or pickaxe to be used by the miner, though this is still to be considered

Player position: PVector velocity: PVector - size: float - damage: int + move(): void + draw(): void + getPosition(): PVector - mine(boolean): void resolveCollision(boolean): void Square health: int sprite: Plmage + takeDamage(int): void + isDestroved(); boolean + getSprite(): Plmage + breakSquare(): void Resource Mineable TimePowerUp - addResource(): Resource addToughness(): void - timeGranted: int + addTime(): void + modTimeAdded(); void + addResource(): Coal + addResource(): Gold

UML

How to Play

The player starts in the center of the screen with the randomized diggable terrain below them. The game stopwatch will be displayed in the top left corner and the round timer will be below it. The game starts when the player moves. They can use the A, S, and D keys to direct their movement and mining. Going left and right allows the player to move and mine horizontally. Holding the down arrow allows the player to mine downwards. When the game stopwatch runs out, players will see a shop GUI where they can use their resources to purchase upgrades. After buying any necessary upgrades they can start a new round and begin mining again. The game will perform the same as before but with any applied buffs. If the bottom is reached the screen will display success and the top left stopwatch will end as the score / record of the run.